

Appl. No. 09/872,141
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Reply to Final Office Action of August 9, 2005

REMARKS/ARGUMENTS

Reconsideration of the rejections set forth in the Final Office Action dated August 9, 2005 is respectfully requested. Claims 1-21, 24-30, 32, 33, and 36-45 are currently pending. Claims 8, 9, 14, 15, 18, 19, 25-27, 37, and 38 have been allowed. Claims 1-7, 10-13, 16, 17, 20, 21, 24, 28-34, 36, and 39-45 have been rejected.

Claim 36 has been amended to depend from claim 33.

Claim Objections

Claim 36 has been objected to by the Examiner for informalities. The Applicants have amended claim 36 in a sincere effort to overcome the Examiner's objection. Specifically, the dependency of claim 36 has been amended, and rather than depending from cancelled claim 35, claim 36 now depends from claim 33.

Rejections under 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1-7, 10-13, 16, 17, 20, and 43 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Finn (U.S. Patent No. 6,728,205), herein after "Finn." Claims 21, 24, 28-33, 36, 39-42, 44, and 45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Finn in view of Doshi (U.S. Patent No. 6,073,248), herein after "Doshi."

1. Independent claims 1, 10, and their respective dependents

Claim 1 recites that a first segment of a path is computed while a fourth element is blocked from being included in the first segment such that the path traverses the fourth element

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in a second segment of the path computed while the third element is blocked from being included in the second segment. The path traverses the third element in the first segment. That is, the device of claim 1 creates a path with a first segment that includes a third element and a second segment that includes a fourth element. The third element is blocked from being included in the second segment, and the fourth element is blocked from being included in the first segment. However, **both the third element and the fourth element are included in the path.** To include both the third element and the fourth element, the fourth element is blocked from being included in a first segment that includes the third element, and the third element is blocked from being included in a second segment that includes the fourth element.

It is respectfully submitted that contrary to the Examiner's assertions in the Final Office Action dated August 9, 2005, Finn does not teach these features of claim 1. At lines 50-56 of column 21 of Finn, Finn teaches:

“....If in decision block 70 decision is made that the cycle and path above do not include all nodes of the graph, then processing proceeds to steps 72-78 and another path is again constructed starting on some node already included, passing through one or more nodes not included, and then ending on another already included node....”

This passage of Finn appears to teach nothing more than constructing a path starting on an “included” node, passing through a “not included” node, and ending on another “included” node. Finn seems to teach that a path is constructed to pass through an unincluded node between two already included nodes. **There is no teaching of blocking any nodes or, further, of blocking nodes that are to be used in one segment from being used to route another segment.**

Finn does not teach that a first segment of a path which includes a third element is computed while a fourth element is blocked from being included in the first segment, or that a second segment of the path which includes the fourth element is computed while the third element is blocked from being included in the second segment. Finn appears to teach of making

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certain that all desired nodes are included in a path, but fails to teach blocking some of the desired nodes such that specific desired nodes are prevented from being in certain path segments.

On page 15 of the Final Office Action dated August 9, 2005, the Examiner makes the following statement:

“Regarding the argument ‘blocking,’ ‘a node is particularly not included in a particular path’ is the same as ‘a node is prevented or blocked in a particular path’ or ‘a node is blocked in a particular path’.”

The Applicants are not entirely clear on the intent of the Examiner’s argument, and submit that Finn fails to teach that a node is particularly not included in a particular path. Rather, Finn appears to disclose that among available nodes, some nodes are not included in a particular path simply because they are not selected (Finn, column 21 at lines 52-58). The third element of claim 1, which is ultimately to be included in a path is blocked from being included in a second segment of the path and, hence, is unavailable for use in creating the second segment of the path, while a fourth element that is ultimately to be included in the path is blocked from being included in a first segment of the path. It is respectfully submitted that the Applicants have not argued that a node is blocked in a particular path but, rather, that the **Applicants have argued that an element is prevented from being available for routing one segment of a path and is included in and, hence, available for use in routing another segment of the path.** Finn does not teach such a limitation, and does not even suggest blocking an element that is to be used in one segment of a path from being used in another segment of the path.

In other passages and figures of Finn, as cited by the Examiner on pages 3 and 4 of the Final Office Action dated August 9, 2005, Finn appears to teach of eliminating edges (see, e.g., column 18 at lines 10-12 and FIG. 2). However, this elimination of edges, as well as failures of nodes, is not related to the routing of a path. While certain nodes are shown in FIG. 2 as not being included in certain arcs/paths, there is no teaching or suggestion that these nodes were in fact blocked from being included in particular arcs/paths. A node not being included in a particular arc does not inherently mean that the node was blocked from being in the arc, as a node may not be included, for example, simply because it is more efficient to use an alternate

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node. The Applicants submit that Finn does not teach, or even remotely suggest, that a first segment of a path (which includes a third element) is computed while a fourth element is blocked from being included, or that a second segment of the path (which includes the fourth element) is computed while the third element is blocked from being included. As such, claim 1 and is believed to be allowable over Finn for at least this reason.

Claims 2-7 and 43 each depend either directly or indirectly from claim 1 and are, therefore, each believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 1. Each of these dependent claims recite additional limitations which, when considered in light of claim 1, are believed to further distinguish the claimed invention over the art of record. By way of example, claim 43 recites that a second segment is computed after a first segment is computed. On page 9 of the Final Office Action dated August 9, 2005, the Examiner has argued that Finn discloses that a second segment is computed after a first segment is computed. It is respectfully submitted that claim 43 requires that a second segment, which is computed while a third element is blocked and a fourth element is traversed, is computed after a first segment, which is computed while the fourth element is blocked and the third element is traversed. Finn does not teach such a limitation. Instead, Finn appears to disclose making certain that all desired nodes are included in a path, but does not disclose preventing a desired node from being included in a segment that is to be traversed before a path segment that is to include the node. Hence, claim 43 is believed to be allowable for at least this additional reason.

Claim 10 recites similar limitations as recited in claim 1. Therefore, claim 10 and its dependents are each believed to be allowable for at least the reason cited above with respect to claim 1.

2. *Independent claim 16 and its dependent*

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Independent claim 16 recites an apparatus for routing a path between a source node and a destination node which includes a blocker for blocking a first element from being used in generating a first segment of a path and for blocking a second element from being used in generating a second segment of the path. The apparatus also includes a path router that generates the first segment to include the source node and the second element but not the first element. The path router also generates the second segment to include the first element after the first segment is generated. Hence, the first element is a component to be used in a path, but is blocked from being used when a first segment is generated. **When a second segment is generated after the first segment is generated, the second segment is generated to include the previously blocked first element.**

Finn does not teach or suggest that certain nodes and their arcs should be blocked. Rather, some nodes and their arcs may not be included in a segment of a path simply because those nodes and arcs, while available, are not selected. Not selecting an element that is available is not the same as blocking or preventing the element from being selected. Regarding the Examiner's arguments on pages 15-16 of the Final Office Action dated August 9, 2005, it is respectfully submitted that a node that is particularly not included in a particular path is not the same as a node that is blocked in a particular path. Blocking a node such that the node cannot be included in a particular path is not the equivalent to not selecting an available node as a blocked node is not available for selection. There is no teaching in Finn of an element that is not available for selection for use in one segment of a path but is available for use in another segment of the path. As such, claim 16 and its dependent are believed to be allowable for at least this reason.

The Applicants respectfully submit that Finn also does not teach of generating a second segment after a first segment is generated such that a first element that was blocked from being included in the first segment is included in the second segment. Rather, Finn appears to disclose making certain that all desired nodes are included in a path, but does not disclose preventing a desired node from being included in a segment that is to be traversed before a path segment that

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is to include the node. Therefore, claim 16 and its dependent are believed to be allowable over Finn for at least this reason as well.

3. *Independent claims 21, 33, and their respective dependents*

Independent claim 21 recites that a circuit path is computed by identifying a first element that is to be traversed the circuit path between a source node and a destination node. As amended, claim 21 requires identifying a second element that is to be traversed by the circuit path, and blocking the second element from being available for use in routing a first segment of the circuit path. The second element is intended to be part of a circuit path that is traversed between a first element and a destination node.

It is respectfully submitted that a node not being included in a segment is not equivalent to a node being blocked from being included. Blocking an element, which is intended to be in a path, from being included in a first segment of the path makes that element unavailable for use in routing the first segment. It is respectfully submitted that Finn does not teach of any nodes being unavailable, only that certain available nodes are not included. Hence, Finn does not teach of a second element that is intended to be part of a circuit path being blocked or unavailable for use in routing a first segment of the path. Finn only teaches that an element may not necessarily be included in a particular segment of a path, and does not even suggest blocking the element from being included. Therefore, claim 21 is believed to be allowable over Finn for at least this reason.

Claims 24, 28-30, 32, and 44 each depend either directly or indirectly from claim 21 and are, therefore, each believed to be allowable over the cited art for at least the reason set forth above with respect to claim 21. Each of these dependent claims recites additional limitations which, when considered in light of claim 21, are believed to further distinguish the claimed invention over the cited art.

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Independent claim 33 recites similar limitations to those recited in claim 21. Accordingly, claim 33 and its dependents are each believed to be allowable over Finn in view of Doshi for at least the reasons set forth with respect to claim 21.

Conclusion

For at least the foregoing reasons, the Applicants believe all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 868-4096.

Respectfully submitted,


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